

REMARKS

Claims 1-4 are canceled and new claims 8 and 9 are added to better represent the claimed invention. Please charge the cost of any additional claim including an extra independent claim to Deposit Account No. 20-0668 of Texas Instruments Incorporated.

Claim 8 calls for "In a system for rendering pixels having an opcode having two boundary checks for the index to avoid accessing outside normal lookup table area of a lookup table, the improvement for reducing the time for rendering pixels comprising:

means for determining maximum and minimum values of said index of said normal table area of said lookup table,

means for expanding the lookup table above and below said maximum and minimum values of said index by replicating the highest value if the index is above the normal table area and replicating the lowest value if the index is below the normal table area and

means for removing said boundary checks."

The background of the invention on page 3, lines 3-5 discusses the two boundary checks for the index to avoid accessing outside the lookup table area. It also mentions that these checks introduce additional instructions and that increases the time for rendering one pixel. This background of the invention is part of the specification. In the summary of the invention on page 4 it states that in accordance with one embodiment of the present invention for a given opcode table, maximum and minimum values of the index are determined and the lookup table is expanded in both directions to take care of these maximum and minimum values and the checks in the core loop are removed,

reducing the total rendering clock count. The summary is part of the specification. This is also found on page 8, line 5-9. Clearly the specification teaches a system with the checks and that the checks that introduce additional instructions and hence increases the time taken for rendering one pixel. It further states that it is desirable to reduce this time. In the summary of the invention, it states on page 4, that the table is expanded in both directions and checks in the core loop are removed to reduce the total rendering clock count. The newly presented claim 8 is presented in the manner of the specification with a system with core loop checks and the improvement of removing these checks. This is further part of the description where as pointed out in the specification that the point of the invention is to overcome the problem associated with a system with core loop checks.

Applicant's new claim 9 is presented as a method for reducing the time for rendering pixels in the system having the boundary checks with method steps. Claim 9 calls for "A method for reducing the time for rendering pixels in a system having an opcoder having two boundary checks for the index to avoid accessing outside normal lookup table area of a lookup table comprising the steps of:

determining maximum and minimum values of said index of said normal lookup table area of said lookup table,
expanding the lookup table above and below said maximum and minimum values of said index by replicating the highest value if the index is above the normal lookup table area and replicating the lowest value if the index is below the normal lookup table area and
removing said boundary checks."

The examiner's attention is directed to page 3, line 3 of the disclosure. It states "The core loop of the opcode should have two boundary checks for the index to avoid accessing outside the lookup table area." It further states that these "checks introduce additional instructions and hence increases the time taken for rendering one pixel." It further states that it is desirable to reduce this time. In the summary of the invention, it states on page 4, that the checks in the core loop are removed to reduce the total rendering clock count. On page 8 at line 8, it states the core loop is removed. Clearly, applicant's disclosure supports such steps.

In view of the above applicant's claim 5, 6, 8 and 9 are deemed allowable and an early notice of allowance of these claims is deemed in order and is respectfully requested.

Respectfully requested;

Robert L. Troike

Robert L. Troike (Reg. 24183)

Telephone No. (301) 751-0825